

# LAND RECLAMATION COMMISSION

STATE OF MISSOURI

P.O. BOX 176

JEFFERSON CITY, MISSOURI 65102

573-751-4041

## Permit To Engage in Surface Mining

LAND RECLAMATION COMMISSION

### ISSUES TO LAFARGE CORPORATION

Pursuant to "The Land Reclamation Act," RSMo, 2001, and on conformity with the statements

In the application, a permit is hereby granted to engage in surface mining of  
sandstone in the state of Missouri. The extent of the

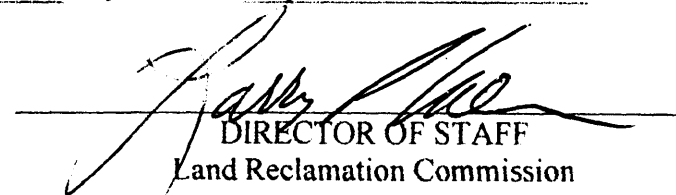
Proposed mining operation(s) will be on 11 acres, more or less.

The locations of the operation(s) under this permit is/are as follows: Renewal

County	Section	Township	Range	Acres Renewed	Acres New	Total Acres	Site/Stream Name	Site Number
Vernon	19	35N	29W	11	0	11	Nevada #1	0843

This permit may be suspended or revoked upon violation of any or all of the conditions set forth in "The Land Reclamation Act," RSMo. 2001, or in such rules and regulations as are promulgated pursuant thereto by the Land Reclamation Commission.

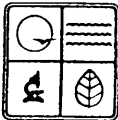
IN WITNESS WHEREOF I have hereunto set my hand this 10th day of September 2004

  
DIRECTOR OF STAFF  
Land Reclamation Commission

Permit No. 0846  
Effective Date 09/10/2004  
Expiration Date 06/15/2005

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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION

PERMIT RENEWAL FOR INDUSTRIAL MINERAL MINES

MISSOURI LAND  
RECLAMATION COMMISSION

P.O. BOX 176  
JEFFERSON CITY, MO 65102-0176

NAME OF CORPORATION, COMPANY, PARTNERSHIP OR INDIVIDUAL <b>Lafarge North America Inc.</b>		DATE <b>8.5.2004</b>	
ADDRESS <b>2200 N. Courtney Rd.</b>	CITY <b>Sugar Creek</b>	STATE <b>MO</b>	ZIP CODE <b>64050</b>
CONTACT PERSON <b>Steve Kidwell</b>		TELEPHONE NUMBER <b>816-257-3607</b>	

**FEES: COMPLETE SECTION I OR SECTION II**

**SECTION I. Fees: Open pit operators and those mining more than 5,000 tons of sand and/or gravel:**

**1. To compute the site fee complete the information below:**

SITE NAME OR NUMBER (add a separate sheet for additional sites)	Mark each month that the site will be operated during the permit year	For sites operated less than six months per permit year pay \$150 For sites operated six months or more per permit year pay \$300
1. <b>846 (11 acres bonded)</b>	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$ <b>300</b>
2.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
3.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
4.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
5.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
6.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
7.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
8.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
9.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
10.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec	\$
TOTAL SITE FEE		\$ <b>300</b>

2. Acreage Fee \$5 X **11** number of acres bonded ..... \$ **55**

3. Annual Permit Fee ..... \$ **500**

4. Total Fee (Add totals from 1, 2 and 3) ..... \$ **855.00**

NOTE: If Total Fee exceeds \$2,500.00 then pay only ..... \$ **2,500**

**SECTION II. FEES: Sand or gravel operators mining less than 5,000 tons per year:**

1. Annual Permit Fee ..... \$ **300**

SIGNATURE OF APPLICANT 	TITLE <b>Envr. Mgr</b>	DATE <b>8.5.2004</b>
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Appeared before me this **5th** day of **August**, 20 **04**, **Steven J. Kidwell**  
to me personally known, who executed the above as their free acts and deeds.

NOTARY PUBLIC EMBOSSEER SEAL	STATE OF <b>MISSOURI</b>	COUNTY (OR CITY OF ST. LOUIS) <b>JACKSON</b>
	SUBSCRIBED AND SWORN BEFORE ME, THIS <b>5th</b> DAY OF <b>August</b> YEAR <b>2004</b>	
	NOTARY PUBLIC SIGNATURE <b>Denise K. Roberts</b>	MY COMMISSION EXPIRES <b>3-28-08</b>
	NOTARY PUBLIC NAME (TYPED OR PRINTED) <b>DENISE K. ROBERTS</b>	
FOR DEPARTMENT USE ONLY: APPROVED BY 		DATE APPROVED <b>9/7/04</b>
		PERMIT NUMBER <b>0846</b>
		EXPIRATION DATE <b>6/15/05</b>



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION

**SITE INFORMATION FORM**

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To be completed for each separate area of disturbance associated with mining operations.

SITE NAME OR NUMBER Nevada No. 1		PERMIT NUMBER 0846	
COMPANY NAME Lafarge Corporation			
COUNTY Vernon	1/4 SECTION Southeast		SECTION 19
TOWNSHIP 35N	RANGE 29W	ACRES 11 (initial bonding) 57 (total long-term mining)	
RIVER OR STREAM NAME (FOR IN-STREAM ACRES) None			
MINERAL COMMODITY Sandstone		ESTIMATED TONS/YEAR (FOR GRAVEL SITES) 70,000 tons/year	

NAME OF LANDOWNER (ATTACH LIST IF MORE THAN ONE) Lafarge Corporation		
ADDRESS 2200 Courtney Road		
CITY Sugar Creek	STATE Missouri	ZIP CODE 64054
SOURCE OF RIGHT TO MINE (CHECK ONE): <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input checked="" type="checkbox"/> OTHER (DESCRIBE): Will own surface and mineral rights		DATE OF AGREEMENT June 15, 2000* *proposed closing date

MINERAL RIGHTS OWNER (ATTACH LIST IF MORE THAN ONE) (See landowner above)		
ADDRESS		
CITY	STATE	ZIP CODE
SOURCE OF RIGHT TO MINE (CHECK ONE): <input type="checkbox"/> MINERAL DEED <input type="checkbox"/> WARRANTY DEED <input type="checkbox"/> OTHER (DESCRIBE):		DATE OF AGREEMENT

**NOTE:** Each site must be shown on a map and be included in a public notice and an approved mine plan.



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
LAND RECLAMATION COMMISSION  
**MINE PLAN**

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RECLAMATION COMMISSION

P.O. BOX 176  
JEFFERSON CITY, MO 65102

TYPE OF PLAN (CHECK ONE):

☐ SHORT TERM, FOR ONE PERMIT YEAR

COMPANY NAME

Lafarge Corporation

☒ LONG TERM, FOR PERIOD THROUGH DATE: JULY 1, 2025

DESCRIPTION OF SITE PRIOR TO LAND RECLAMATION COMMISSION PERMITTING (BY APPLICANT OR PRIOR OPERATOR), INCLUDING SOIL, VEGETATION AND TOPOGRAPHY.

SEE INSERT A

OPERATION PLAN - 10 CSR 40-10.020(2)(D)1.

A. TOPSOIL

AVERAGE DEPTH OF TOPSOIL, PRIOR TO LAND RECLAMATION COMMISSION PERMITTING

4 to 6 INCHES

IS TOPSOIL TO BE SOLD OR DISCARDED OFFSITE?

☐ YES OR ☒ NO

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL REMOVAL

SEE INSERT B

DESCRIBE METHODS AND EQUIPMENT USED FOR TOPSOIL STORAGE AND PROTECTION

SEE INSERT C

FOR

DESCRIBE METHODS AND LOCATION OF SPOIL PLACEMENT AND DISPOSAL

SEE INSERT D

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**C. ACID MATERIALS**

DESCRIBE METHODS AND EQUIPMENT USED FOR HANDLING ACID MATERIALS (IF NONE IS ANTICIPATED, WRITE "NONE" BELOW)

NONE ANTICIPATED

**D. PIT INFORMATION (GIVE ALL DIMENSIONS IN FEET)**

DESCRIBE LOCATION AND ORIENTATION OF PIT, IF NOT CLEAR ON SITE MAPS

SEE INSERT E

YES NO

☐☒

Will any excavation be at or within fifty feet (50') of the right-of-way of any public road?

☐☒

Will any highwall consisting of unconsolidated materials be left within fifty feet of the right-of-way of any public road? (NOTE: For unconsolidated materials left in place, a slope of no more than forty degrees may start near the right of way, and in no case may the excavation be closer to the right of way than fifty feet or twenty-five feet plus one and one-half (1-½) times the depth of unconsolidated material, whichever is greater, unless a variance is granted by the Commission.)

☐☒

Will any excavation start at or within fifty feet (50') of any property line?  
(NOTE: If the answer is "yes", a safety barrier may be needed.)

**RECLAMATION PLAN - 10 CSR 40-10.020(2)(D)2.****A. REVEGETATION** (Attach additional sheets, if needed)

REVEGETATION MIX #1

Pasture Revegetation

PURPOSE OR LAND USE

Agricultural/Pasture

B. SEEDING OR PLANTING TIME

August 15 to October 15

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

SEE INSERT F

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Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDED SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE
Tall Fescue Annual Lespedeza Red Clover	9 3 1.5	Perimeter Trees in buffer zones (non-deciduous hardwood)	15

REVEGETATION MIX #2

PURPOSE OR LAND USE

B. SEEDING OR PLANTING TIME

DESCRIBE METHODS AND EQUIPMENT TO BE USED FOR SEEDING OR PLANTING

Lime and fertilizer will be applied according to recommendations made, based on an analysis of soil texture and nutrients. Mulch will be applied to all slopes exceeding 5:1.

SEEDED SPECIES	POUNDS/ACRE	TREE OR SHRUB SPECIES	STEMS/ACRE

ATTACH ADDITIONAL SHEETS FOR ADDITIONAL SEED MIXES.

**B. GRADING**

DESCRIBE PROPOSED RECLAIMED TOPOGRAPHY, INCLUDING SLOPES

SEE INSERT G

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**C. DESCRIBE THE GENERAL SEQUENCE AND TIMING OF THE FOLLOWING ACTIVITIES**

GRADING

SEE INSERT H

REPLACEMENT OF TOPSOIL

SEE INSERT I

REVEGETATION

SEE INSERT J

AVERAGE DEPTH OF REPLACED TOPSOIL (INCHES)

A horizon (4-6 inches) + B Horizon (6-8 inches) = 12 inches

**D. USE OF LAND WHEN RECLAIMED**

Estimate acreage of each land use below, after reclamation

ESTIMATED ACRES:

Wildlife (forest or other habitat with livestock excluded)

Agricultural (pasture, cropland, and horticultural)

11 (Initial Bonding)  
57 (Total Long Term  
Mining)

Development (residential, industrial, and recreational)

Water impoundments (for wildlife, agricultural, or development)

By my signature, I attest to the following:

1. All statements made on this Mine Plan Form are correct, complete, and true, to the best of my knowledge.
2. I or the company I am authorized to represent intend(s) to mine in accordance with this Mine Plan Form, and in accordance with the Missouri Land Reclamation Act, Sections 444.760 through 444.789, RSMo and all rules, regulations, orders, decisions and permits of the Missouri Land Reclamation Commission pertaining to my company's surface mining operations.
3. I have obtained the approval of all landowner's for all proposed post-reclamation land uses.
4. I have a valid agreement with all landowners which gives me the right to grant access to the Director of the Missouri Land Reclamation Commission and his authorized representatives, and I grant such access, and further where I have no such right, I have attached signed affidavits from the landowners, granting such access.

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SIGNATURE OF APPLICANT <i>C. Beard</i>		TITLE Quality Control Manager	DATE 05-04-00
NOTARY PUBLIC EMBOSSEER SEAL	STATE <i>Kansas</i>	COUNTY (OR CITY OF ST. LOUIS) <i>Johnson</i>	
	SUBSCRIBED AND SWORN BEFORE ME, THIS <i>4</i> DAY OF <i>May</i> <i>16</i> 2000		USE RUBBER STAMP IN CLEAR AREA BELOW
	NOTARY PUBLIC SIGNATURE <i>Juanita Exceen</i>	MY COMMISSION EXPIRES <i>9/28/00</i>	
	NOTARY PUBLIC NAME (TYPED OR PRINTED) <i>Juanita S. Exceen</i>		
APPROVED BY (DIRECTOR'S REPRESENTATIVE) <i>John Trueson for S.F.</i>		DATE APPROVED <i>6/16/2000</i>	PERMIT NUMBER <i>0846</i>





#### **INSERT A – Description of Site Prior to Land Reclamation**

This mine plan covers both short-term (one permit year) and long-term mining. The property of interest is located approximately 10 miles southeast of Nevada, Missouri in Vernon County (see Figure No. 1 – Site Vicinity Map). Areal extent of the entire property is about 75 acres. The short-term plan is to initially permit/bond approximately 11 acres in the northeast portion of the site. An additional 46 acres will be considered for long-term mine planning.

Existing site features are displayed on Figure No. 2, Existing Site Plan. The property is bounded on the south and east by unpaved county roads. The high elevation within the property limits is approximately 885 feet (NGVD) within the north-central portion and the low elevation is about 820 feet within an erosional draw at the southern limits. The terrain is considered to be gently rolling with a total relief of about 65 feet.

Current land use is considered to be agricultural (pasture). Existing vegetation includes fescue, trees, and miscellaneous brush. Approximately 25 percent of the property is wooded (southeast corner). A wooden shed is present within the northeast portion of the site. Existing utilities include a southwest-northeast trending gas pipeline that dissects through the property and a north-south trending water line at the far eastern limits of the property.

Subsurface borings drilled at the site indicated a subsurface profile consisting of 0 to 10+ feet of soil overlying interbedded sandstone and shale bedrock. The soil profile was characterized as 4 to 6 inches of soil overlying loessial clays.

#### **INSERT B – Describe Methods and Equipment Used for Topsoil Removal**

Brush and trees will be cleared using a bulldozer. Effort will be taken to limit the amount of large tree clearing on the site. A minimum of 12 inches of topsoil/loessial clay will be stripped off each proposed mining area using an end loader. Topsoil removal activities will endeavor to limit topsoil stripping to areas that will be mined in the next year (approximately 1 to 1.5 acres).

#### **INSERT C – Describe Methods and Equipment Used for Topsoil Storage and Protection**

Topsoil will be initially stockpiled near the northeast corner of the property (see Figure No. 3). The stockpile will be shaped so that a relatively uniform thickness is present over the areal extent. Each area will be seeded to provide erosion protection. Additional erosion control measures may be provided on an as needed basis. As mining progresses over the long-term plan, additional stockpiles will be constructed in the near vicinity of the current exposed pit.

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**INSERT D – Describe Methods and Location of Spoil Placement and Disposal**

Overburden and spoils excavated from the initial pit will be stockpiled in the northern portion of the permitted/bonded area (See Figure No. 3). Upon completing mining within the initial pit, further overburden and spoil will be placed at the base of the pit and graded prior to replacing topsoil and vegetation. This process will be confirmed throughout the duration of mining. Final grades will be 3(H):1(V) or flatter.

**INSERT E – Describe Location and Orientation of Pit, If not Clear on Site Maps**

The initial mine pits will be located within the southern half of the permit/bonded area. All excavations will allow for a minimum 50-foot buffer between the pit and any property line and/or right-of-way line. In addition, an approximate 150-foot buffer zone (no mining) will be maintained between the pits and the centerline of the erosional draw. The long-term mine plan also allows for a minimum 150-foot wide buffer at the location of the gas pipeline (See Figure No. 3).

Mining will be conducted in approximate 100-foot wide pits. Initial pit excavation will start approximately 150 feet east of the erosional draw and proceed east to a point at least 50 feet from the county road right-of-way. Sandstone mining in each pit will be conducted using a multiple bench operation. Where the rock hardness allows, excavation will be made with bulldozers using ripping techniques. Blasting may be required to remove well cemented materials. Access to the mining areas by haul trucks and other heavy equipment will be accomplished on gravel drives constructed off the county road at the east property limits. Fragmented rock (4-inch minus) will be loaded into the haul trucks for transport to the Kansas City area. The intended haul route to access U.S. Highway 71 is shown on Figure No. 4.

The resulting cut slope at the east end of each pit (11 bonded acres) will involve 2H:1V slopes in the soils and a vertical sandstone excavation with approximate 10-foot horizontal benches every 10 to 15 feet in height.

Mining (excavations) will be limited to the initial permit/bonded area (11 acres) for about 5 years. Future permitting/bonding will be required for approximately 46 additional acres to be mined between about 5 and 25 years after initial work begins. Mining procedures to be conducted at these locations will be in general accordance with those discussed above. Access to the property west of the erosional draw will be accomplished by the construction of a culvert/crushed rock crossing (See Figure No. 3 for mining limits and access features).

**INSERT F – Describe Methods and Equipment to be Used for Seeding or Planting**

Discing of the topsoil will be conducted as necessary to limit over compaction under heavy equipment loads. Fertilizer and lime will be applied as necessary based on results obtained from current SCS soil test results. Upon replacing a minimum of 12- inches of topsoil over each revegetation area, the seedbed will be rolled to provide a firm surface.

A "Brillion-type" seeder or drill or similar planter will be used with a seedbox and metering equipment that are designed for the seed being sown. Seed will be placed at a depth of ¼ to ½ inches.

Perimeter trees (buffer to mining) will be planted initially along the east property line (See Figure No. 3). Long-term plans provide for perimeter tree planting along the south and north borders.

**INSERT G – Describe Proposed Reclaimed Topography, Including Slopes**

Grading of overburden and spoil will endeavor to achieve similar surface water drainage towards the erosional draw. Perimeter berms will be constructed at locations of vertical sandstone cut slopes to achieve a slope of 3(H):1(V) or flatter.

**INSERT H – Describe the General Sequence and Timing of Grading**

The initial pit will be graded with stockpiled overburden and spoil upon completing excavations. Additional future pits will be graded as the pit advances and as materials are placed in mined-out portions. Final grading operations will be completed within one-year of permit expiration on all mined-out areas.

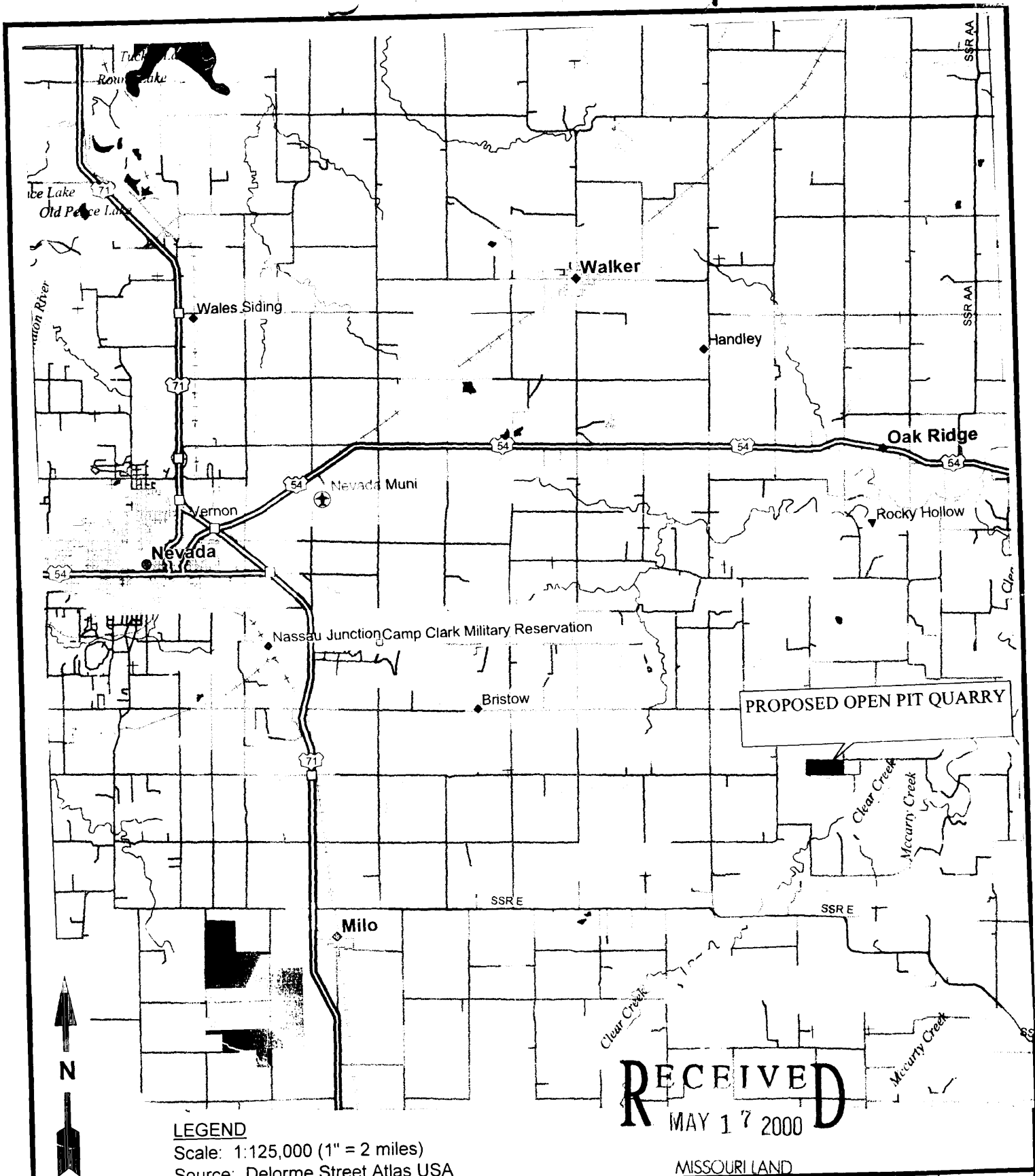
**INSERT I – Describe the General Sequence and Timing of Replacement of Topsoil**

Topsoil will be replaced to a minimum uniform depth of 12 inches. Discing will be conducted as necessary to limit over compaction.

**INSERT J – Describe the General Sequence and Timing of Revegetation**

Topsoil areas will be seeded during the first optimum seeding period (fall) following topsoil replacement.

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Overland Park, Kansas 66211



**Lafarge Corporation**

**Nevada, Missouri**

**Land Reclamation Permit No. 0846**

**Site Vicinity Map**

MISSOURI LAND  
 RECLAMATION COMMISSION

PROJECT NO:

**49C2000024**

DATE:

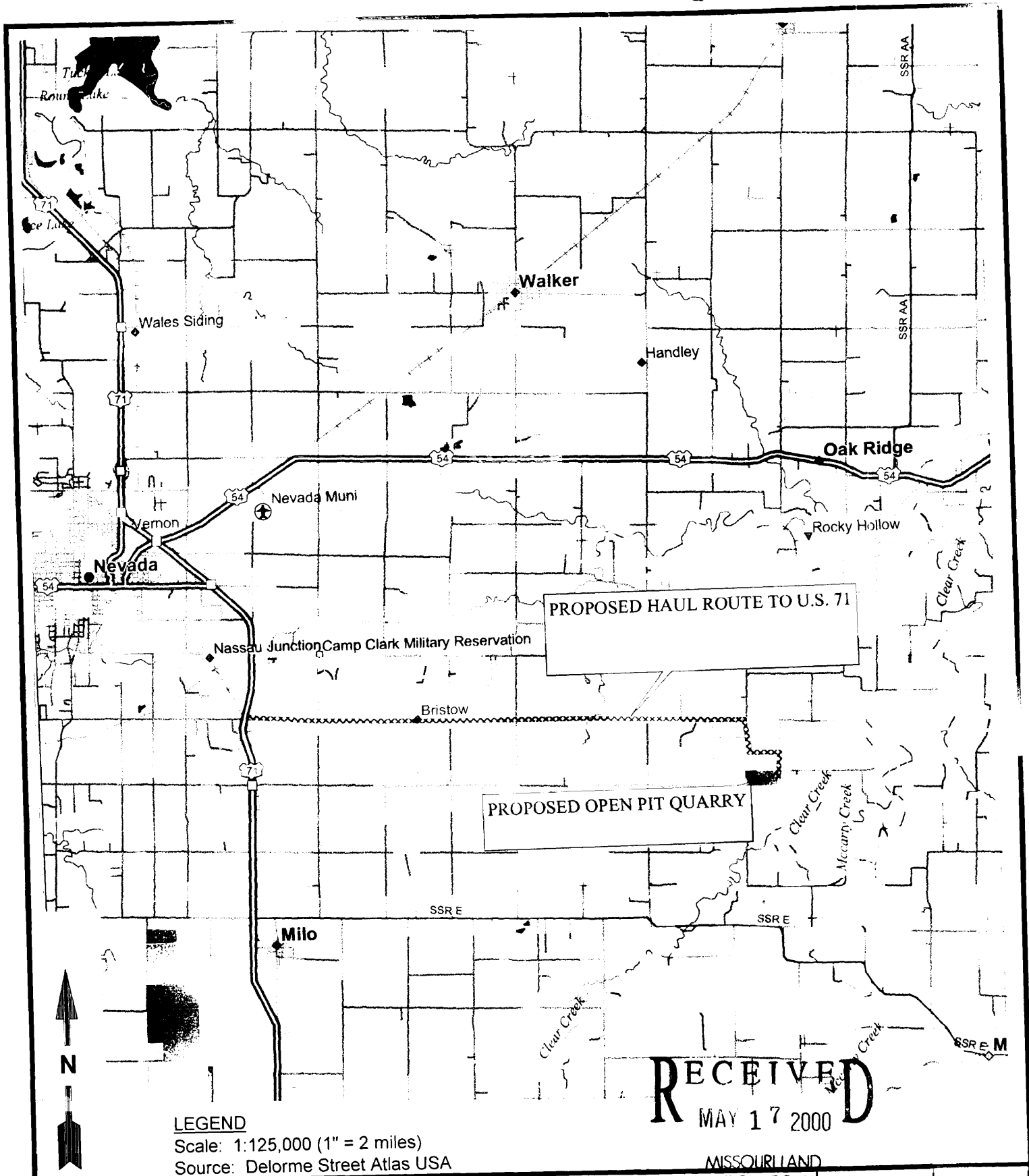
**25-Apr-00**

CHK'D BY:

**LTW**

FIGURE

**No. 1**



# **Woodward-Clyde Consultants**

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Overland Park, Kansas 66211



**Lafarge Corporation**

**Nevada, Missouri**

**Land Reclamation Permit No. 0846**

**Proposed Haul Route to U.S. Highway 71**

MISSOURI LAND RECLAMATION COMMISSION

PROJECT NO:

**49C2000024**

DATE:

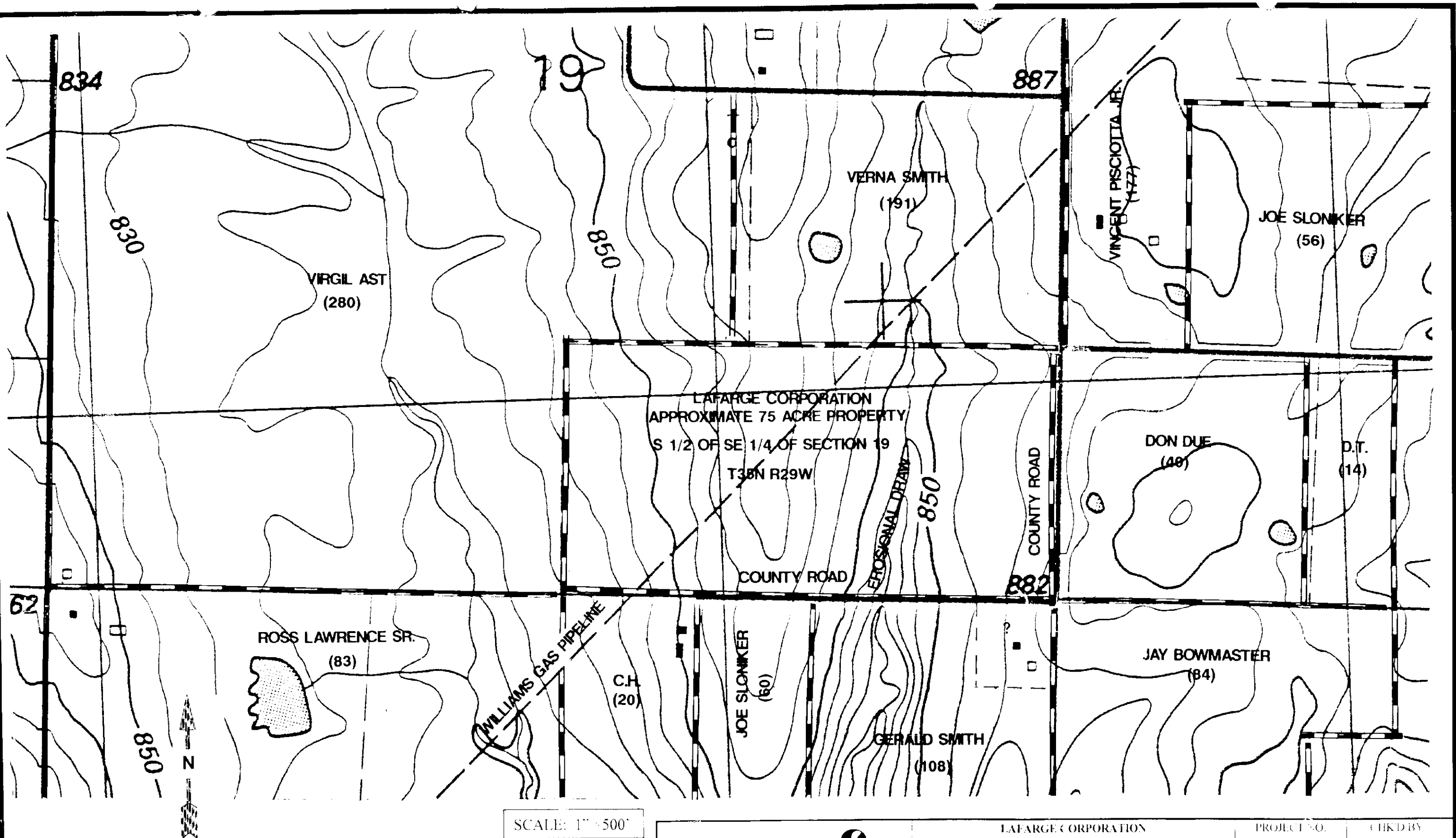
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FIGURE

**No. 4**



SOURCE: USGS QUADRANGLE - DEDERICK, MO. AND  
MILLER MANAGEMENT SERVICES, INC. - 1995 PLAT MAP

SCALE: 1" = 500'

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LAFARGE CORPORATION  
NEVADA, MISSOURI

LAND RECLAMATION PERMIT NO. 0846  
EXISTING SITE PLAN/PROPERTY OWNERS

PROJECT NO.  
49C2000024

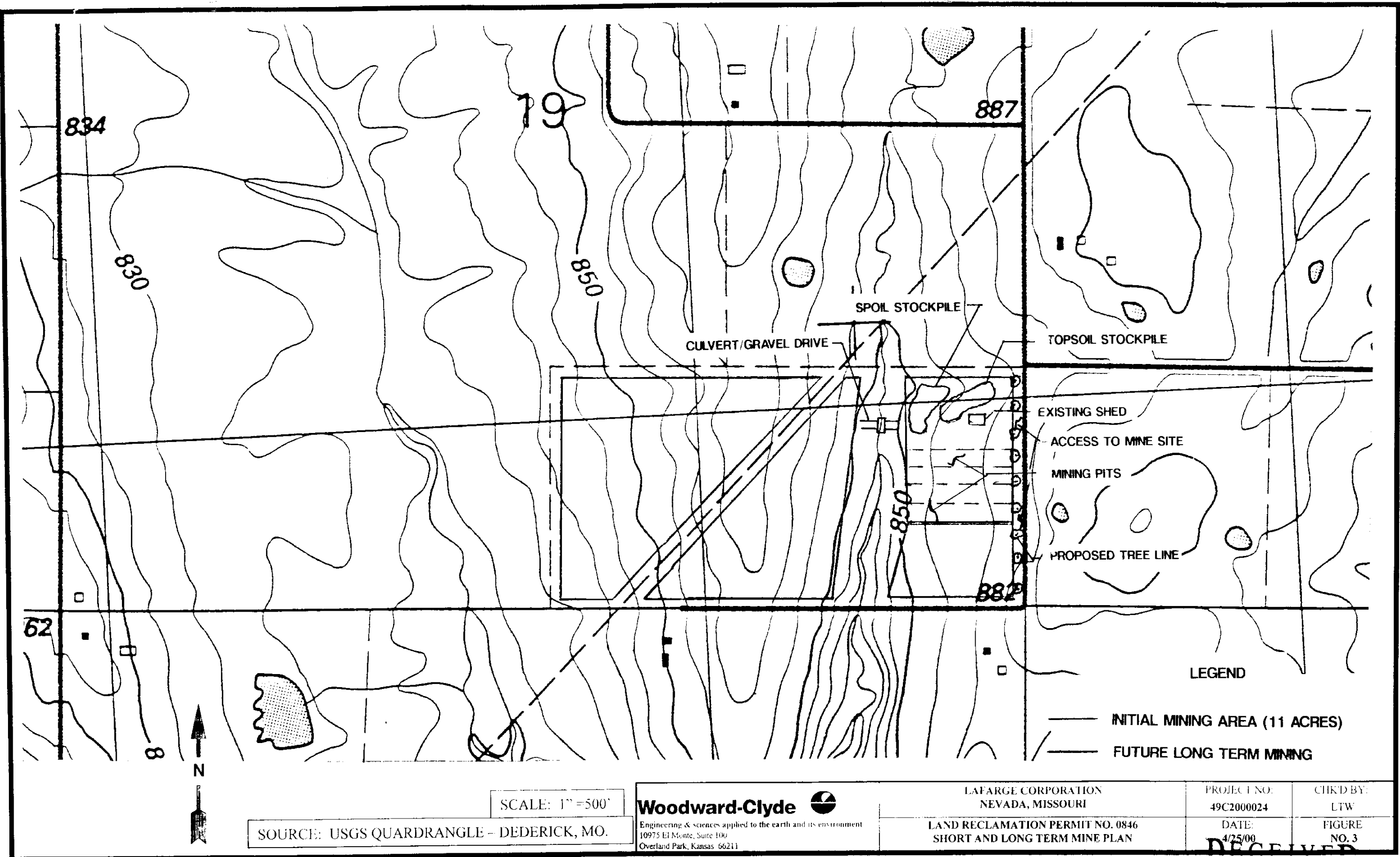
DATE  
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LIW

FIGURE  
NO. 2

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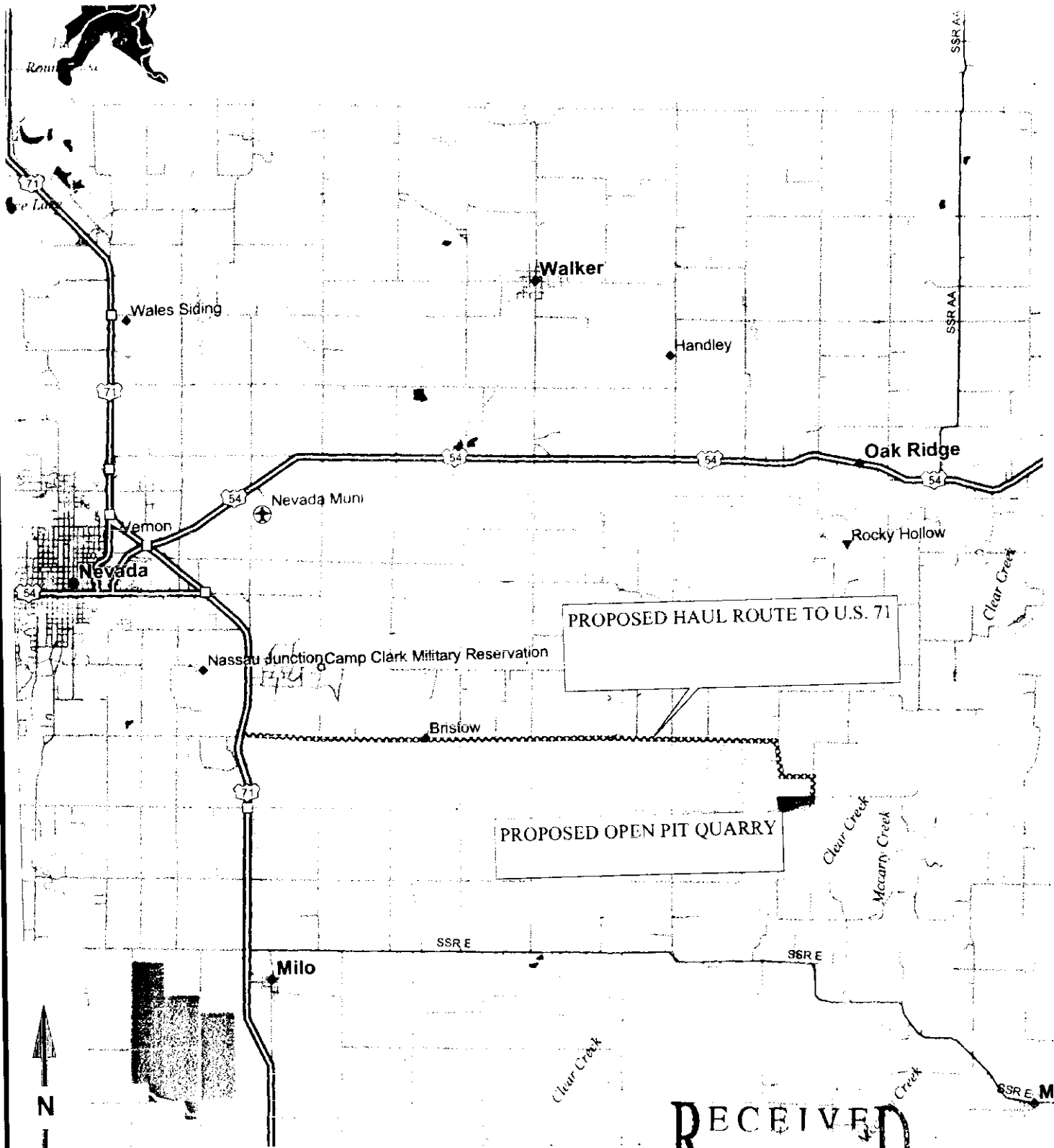
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PROPOSED HAUL ROUTE TO U.S. 71

PROPOSED OPEN PIT QUARRY



**LEGEND**

Scale: 1:125,000 (1" = 2 miles)  
Source: Delorme Street Atlas USA

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Lafarge Corporation  
Nevada, Missouri

Land Reclamation Permit No. 0846  
Proposed Haul Route to U.S. Highway 71

PROJECT NO:  
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DATE:  
25-Apr-00

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LTW  
FIGURE  
No. 4